

ABSTRACT

The present invention presents a method and apparatus for phase hopping and space-time coding signals for transmission on multiple antennas. The method and apparatus provides expansion of a $N \times N'$ space time block code to a $M \times M'$ space time block code, where $M > N$, by using phase hopping on the symbols within the $N \times N'$ space time block code to allow transmission of the space time block code on a number of diversity antennas greater than N' . A result of M antenna diversity may be achieved for M transmit antennas.

1. A method for transmitting a space time block code on multiple antennas, comprising:
expanding a $N \times N'$ space time block code to a $M \times M'$ space time block code, where $M > N$, by using phase hopping on the symbols within the $N \times N'$ space time block code to allow transmission of the space time block code on a number of diversity antennas greater than N' .
A result of M antenna diversity may be achieved for M transmit antennas.